

WHAT IS CLAIMED IS:

1           1.    A method of authorizing an electronic commerce  
2 transaction between a purchaser using a credit card, an  
3 on-line merchant, and a credit card company, said method  
4 comprising the steps of:

5           receiving by the merchant, a purchase request from  
6 the purchaser;

7           obtaining by the merchant, the purchaser's credit  
8 card information;

9           establishing a multi-party data session between the  
10 purchaser, the on-line merchant, and the credit card  
11 company;

12          producing a bill by the merchant in the multi-party  
13 data session, said bill including the purchaser's credit  
14 card information;

15          verifying the credit card information by the credit  
16 card company;

17          taking an image of the purchaser with a Web camera;

18          validating the purchaser's image by the credit card  
19 company;

20          utilizing a whiteboard application to obtain the  
21 purchaser's signature;

22          validating the purchaser's signature by the credit  
23 card company; and

24           approving the transaction upon positively verifying  
25   the credit card information and validating the  
26   purchaser's image and signature.

1           2.   The method of authorizing an electronic  
2   commerce transaction of claim 1 wherein the step of  
3   validating the image by the credit card company includes  
4   the steps of:

5           storing in an image database, a processed image of  
6   a valid cardholder associated with the credit card; and

7           utilizing an image recognition program to compare  
8   the image of the purchaser with the stored image of the  
9   valid cardholder.

1           3.   The method of authorizing an electronic  
2   commerce transaction of claim 1 wherein the step of  
3   validating the purchaser's signature by the credit card  
4   company includes the steps of:

5           storing in a signature image database, a processed  
6   image of a signature of a valid cardholder associated  
7   with the credit card; and

8           utilizing an image recognition program to compare  
9   the signature of the purchaser with the stored image of  
10   the valid cardholder's signature.

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1           4.    A method of authorizing an electronic commerce  
2 transaction between a purchaser using a credit card, an  
3 on-line merchant, and a credit card company, said method  
4 comprising the steps of:

5           receiving by the merchant, a purchase request from  
6 the purchaser;

7           obtaining by the merchant, the purchaser's credit  
8 card information;

9           establishing a multi-party data session between the  
10 purchaser, the on-line merchant, and the credit card  
11 company;

12           obtaining the purchaser's credit card information by  
13 the credit card company through the multi-party data  
14 session;

15           determining by the credit card company whether the  
16 credit card is valid;

17           utilizing a whiteboard application to obtain the  
18 purchaser's signature, upon determining that the credit  
19 card is valid;

20           determining by the credit card company whether the  
21 purchaser's signature is valid; and

22           approving the transaction upon determining that the  
23 signature is valid.

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1           5. The method of authorizing an electronic  
2 commerce transaction of claim 4 wherein the step of  
3 determining by the credit card company whether the  
4 purchaser's signature is valid includes the steps of:  
5           storing in a signature image database, a processed  
6 image of a signature of a valid cardholder associated  
7 with the credit card; and  
8           utilizing an image recognition program to compare  
9 the signature of the purchaser with the stored image of  
10 the valid cardholder's signature.

1           6. The method of authorizing an electronic  
2 commerce transaction of claim 4 further comprising, after  
3 the step of determining by the credit card company  
4 whether the credit card is valid, the step of rejecting  
5 the transaction upon determining that the credit card is  
6 not valid.

1           7. The method of authorizing an electronic  
2 commerce transaction of claim 4 further comprising, after  
3 the step of determining by the credit card company  
4 whether the purchaser's signature is valid, the step of  
5 rejecting the transaction upon determining that the  
6 purchaser's signature is not valid.

1           8. The method of authorizing an electronic  
2 commerce transaction of claim 4 further comprising the  
3 steps of:

4           taking an image of the purchaser with a Web camera;  
5 and

6           determining by the credit card company whether the  
7 purchaser's image is valid.

1           9. The method of authorizing an electronic  
2 commerce transaction of claim 8 wherein the step of  
3 determining by the credit card company whether the  
4 purchaser's image is valid includes the steps of:

5           storing in an image database, a processed image of  
6 a valid cardholder associated with the credit card; and

7           utilizing an image recognition program to compare  
8 the image of the purchaser with the stored image of the  
9 valid cardholder.

1           10. The method of authorizing an electronic  
2 commerce transaction of claim 8 further comprising, after  
3 the step of determining by the credit card company  
4 whether the purchaser's image is valid, the step of  
5 rejecting the transaction upon determining that the  
6 purchaser's image is not valid.

11. A system for authorizing an electronic commerce transaction between a purchaser using a credit card, an on-line merchant, and a credit card company, said system comprising:

a server associated with the merchant for receiving a purchase request from the purchaser, and for obtaining the purchaser's credit card information;

a packet data network that connects the purchaser, the merchant, and the credit card company in a multi-party data session;

a Web camera for taking an image of the purchaser in response to the purchaser sending the purchase request to the merchant;

a first database that stores valid credit card information, said valid credit card information being compared to the purchaser's credit card information to verify the purchaser's information; and

a second database that stores processed images of valid cardholders, said images of valid cardholders being compared to the image of the purchaser to validate the purchaser's image;

whereby the credit card company approves the transaction upon positively verifying the credit card information, and upon validating the purchaser's image.

1           12. The system for authorizing an electronic  
2 commerce transaction of claim 11 further comprising:

3           a whiteboard application for capturing an image of  
4 the purchaser's signature; and

5           a third database that stores processed images of  
6 valid cardholder signatures, said images of valid  
7 cardholder signatures being compared to the image of the  
8 purchaser's signature to validate the purchaser's  
9 signature.

1           13. A system for authorizing an electronic commerce  
2 transaction between a purchaser using a credit card, an  
3 on-line merchant, and a credit card company, said system  
4 comprising:

5           a server associated with the merchant for receiving  
6 a purchase request from the purchaser, and for obtaining  
7 the purchaser's credit card information;

8           a packet data network that connects the purchaser,  
9 the merchant, and the credit card company in a multi-  
10 party data session;

11           a whiteboard application for capturing an image of  
12 the purchaser's signature;

13           a first database that stores valid credit card  
14 information, said valid credit card information being

15 compared to the purchaser's credit card information to  
16 verify the purchaser's information;

17 a second database that stores processed images of  
18 valid cardholder signatures; and

19 an image recognition program that validates the  
20 purchaser's signature by comparing the image of the  
21 purchaser's signature to an image of a valid cardholder's  
22 signature from the second database;

23 whereby the credit card company approves the  
24 transaction upon positively verifying the credit card  
25 information, and upon validating the purchaser's  
26 signature.

1 14. The system for authorizing an electronic  
2 commerce transaction of claim 13 wherein the packet data  
3 network includes a multicasting mechanism for  
4 establishing a multi-party data session between the  
5 purchaser, the merchant, and the credit card company in  
6 which information related to the transaction is sent to  
7 a multicast Internet Protocol (IP) address of a multicast  
8 group to which the purchaser, the merchant, and the  
9 credit card company belong.





6           validating the purchaser's signature; and  
7           approving the transaction by the credit card company  
8   upon positively validating the purchaser's signature.

1           17. A system for authorizing a face-to-face  
2   commercial transaction between a purchaser using a credit  
3   card and a merchant, said system comprising:

4           a data link between the merchant and a credit card  
5   company for sending the purchaser's credit card  
6   information from the merchant to the credit card company;

7           a first database of valid credit card information  
8   for verifying the purchaser's credit card information;

9           a Web camera for taking an image of the purchaser;

10          a second database of processed images of valid  
11   cardholders for validating the purchaser's image; and

12          an image recognition program for validating the  
13   purchaser's image by comparing the purchaser's image to  
14   a processed image of a valid cardholder from the second  
15   database;

16          whereby the credit card company approves the  
17   transaction upon positively verifying the credit card  
18   information and validating the purchaser's image.

18. A method of authorizing an electronic commerce transaction between a purchaser using a credit card, an on-line merchant, and a credit card company in which the merchant receives a purchase request from the purchaser and obtains the purchaser's credit card information, and the credit card company verifies the credit card information, said method characterized by the steps of:

establishing a multi-party data session between the purchaser, the on-line merchant, and the credit card company;

taking an image of the purchaser with a Web camera; validating the purchaser's image by the credit card company utilizing an image recognition program and a database of valid cardholder images;

obtaining the purchaser's signature with a whiteboard application;

validating the purchaser's signature by the credit card company utilizing the image recognition program and a database of valid cardholder signatures; and

approving the transaction by the credit card company upon positively verifying the credit card information and validating the purchaser's image and signature.